IN THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended) A method to allocate bandwidth, which method is implemented at a central controller of an ad-hoc network, comprising:

allocating, at the central controller, a fixed amount of bandwidth to a ~~certain~~ QoS connection, the QoS connection requiring a certain quality of service (QOS), wherein an operator ~~owner~~ of said ~~certain~~ QoS connection is a requesting terminal which is a terminal of said ad-hoc network, and the fixed amount of bandwidth is independent from an actual needed amount of bandwidth;

freeing, at the central controller, a certain amount of the allocated fixed amount of bandwidth as freed bandwidth after receiving a resource request from the operator of said QoS connection indicating the actual needed amount of bandwidth, wherein the actual needed amount of bandwidth does not exceed said fixed amount of bandwidth and[[,]] said freed bandwidth ~~being~~ is a difference between the allocated fixed amount of bandwidth and the actual [[a]] needed amount of bandwidth, ~~wherein said needed amount of bandwidth is determined at the requesting terminal and transmitted to the central controller, and does not exceed said fixed amount of bandwidth;~~

allocating said freed bandwidth to a non-QOS connection; [[and]]

when said operator of the QoS connection ~~requesting terminal~~ transmits a request for a new needed amount of bandwidth greater than said needed amount of bandwidth, the new needed amount of bandwidth not exceeding said fixed amount of bandwidth, immediately returning as much of the freed bandwidth as required so that said new needed amount of bandwidth is available to said operator of the QoS connection ~~requesting terminal to secure said certain QOS~~;

determining, in the requesting terminal, a filling status of a transmit queue which

indicates how much sending data is in the transmit queue,

determining, in the requesting terminal, said actual needed amount of bandwidth as

bandwidth needed in a next transmission frame, the actual needed amount of bandwidth

depending on the filling status of the transmit queue and not exceeding said fixed amount of

bandwidth, and

transmitting, from the requesting terminal, said actual needed amount of bandwidth to

said central controller with a current transmission frame.

2. (Previously Presented) The method according to claim 1, further comprising:

allocating some or all of said freed bandwidth to another connection of the ad-hoc

network, the another connection being a connection without a fixed amount of allocated

bandwidth.

3. (Canceled).

4. (Currently Amended) A method to reserve bandwidth for a connection of an ad-

hoc network, which method is implemented at a requesting terminal of said ad-hoc network,

wherein the requesting terminal or a central controller comprises a transmit queue for

buffering sending data, and the requesting terminal is a terminal of the ad-hoc network with

said central controller, the method comprising:

reserving, at the requesting terminal, a fixed amount of bandwidth to be provided to

for providing a certain quality of service (QOS) for said QoS connection, the QoS connection

requiring a certain quality of service (QoS);

determining, at the requesting terminal, a filling status of the transmit queue which indicates how much sending data is in the transmit queue;

freeing, at the controller, a certain amount of the reserved fixed amount of bandwidth as freed bandwidth, after receiving a resource request from the requesting terminal indicating the actual needed amount of bandwidth, wherein the actual needed amount of bandwidth does not exceed said fixed amount of bandwidth and said actual needed amount of bandwidth is determined at the requesting terminal based on the filling status of the transmit queue, said freed bandwidth being a difference between the reserved fixed amount of bandwidth and [[a]] the actual needed amount of bandwidth, wherein said needed amount of bandwidth is determined at the requesting terminal based on the filling status of the transmit queue, is transmitted to the central controller, and does not exceed said fixed amount of bandwidth;

reserving said freed bandwidth to be provided to a non-QOS connection;

determining, at the requesting terminal, a new needed amount of bandwidth which is needed in a next transmission frame for the QoS connection, the new needed amount of bandwidth being greater than said needed amount of bandwidth, depending on the filling status of the transmit queue, and not exceeding said fixed amount of bandwidth;

transmitting, from the requesting terminal, a request for said new needed amount of bandwidth to said central controller for the QoS connection with a current transmission frame; and

immediately returning, to the requesting terminal, as much of the freed bandwidth as required so that said new needed amount of bandwidth is available to said requesting terminal for the QoS connection to secure said certain QOS.

5. (Currently Amended) The method according to claim 4, further comprising:

operating said central controller by allocating a fixed amount of bandwidth to a certain connection requiring a certain quality of service, wherein an operator ~~owner~~ of said certain connection is a requesting terminal which is a terminal of said ad-hoc network,

freeing a certain amount of the allocated fixed amount of bandwidth as freed bandwidth, said freed bandwidth being the difference of said fixed amount of bandwidth and a needed amount of bandwidth indicated by said operator ~~owner~~, and

in case said operator ~~owner~~ requests a re-allocation of at least parts of the freed bandwidth, immediately re-allocating as much of the freed bandwidth as required so that said needed amount of bandwidth is available to said operator ~~owner~~.

6. (Previously Presented) The method according claim 1, wherein

said ad-hoc network is an ad hoc network operated according to the European Telecommunications Standard Institute High Performance Radio Local Area Networks/2 (ETSI HIPERLAN/2) standard.

7. (Currently Amended) A central controller of an ad-hoc network, comprising:

a QOS bandwidth allocation means for allocating a fixed amount of bandwidth to a QoS ~~certain~~ connection, the QoS connection requiring [[with]] a certain quality of service (QOS) ~~requirement~~, and a requesting terminal being an operator ~~owner~~ of said QoS connection;

a bandwidth freeing means for receiving a request signal sent out by said operator ~~owner~~ of said QoS connection indicating [[a]] an actual needed amount of bandwidth and when a certain amount of bandwidth neither exceeds the allocated fixed amount of bandwidth nor said needed amount of bandwidth, freeing the certain amount of bandwidth which is a difference between the allocated fixed amount of bandwidth and said needed amount of

bandwidth, wherein the _actual_ needed amount of bandwidth is determined at the requesting

terminal and transmitted to the central controller;

a non-QOS allocating means for allocating said freed bandwidth to a non-QOS

connection;

a request receiving means to receive a request for a new needed amount of bandwidth,

needed in a next transmission frame, greater than said needed amount of bandwidth from said

operator of said QoS connection with a current transmission frame, the new needed amount

of bandwidth not exceeding said fixed amount of bandwidth; and

a bandwidth returning means for immediately returning as much of said freed certain

amount of bandwidth as required so that said new needed amount of bandwidth according to

said request signal is available to said operator ~~owner~~ of said QoS connection ~~to secure said~~

~~certain QOS~~.

8. (Previously Presented) The central controller according to claim 7, comprising

a transmit queue for buffering sending data, and

a monitoring means for monitoring a filling status of said transmit queue and

indicating said needed amount of bandwidth, which depends on the filling status of the

transmit queue, to said bandwidth freeing means or to said bandwidth re-allocation means.

9. (Previously Presented) The central controller according to claim 7, wherein

said ad-hoc network is operated according to the European Telecommunications

Standard Institute High Performance Radio Local Area Networks/2 (ETSI HIPERLAN / 2)

standard.

10. (Currently Amended) A requesting terminal of an ad-hoc network having a <u>QoS</u> connection with other terminals of the ad-hoc network or with a central controller of the ad-hoc network, the <u>QoS</u> connection requiring a certain quality of service (QOS) and ~~therefore~~ a fixed allocated amount of bandwidth, the requesting terminal comprising:

a transmit queue for buffering sending data;

a monitoring means for monitoring a filling status of said transmit queue and sending out a request signal to said central controller indicating [[a]] <u>an actual</u> needed amount of bandwidth, which depends on the filling status of said transmit queue, the <u>actual</u> needed amount of bandwidth being determined at the requesting terminal and not exceeding the fixed allocated amount of bandwidth, wherein

the controller frees a certain amount of the reserved fixed amount of bandwidth as freed bandwidth, said freed bandwidth being a difference between the fixed amount of bandwidth and the needed amount of bandwidth,

the controller reserves said freed bandwidth to a non-QOS connection, and the requesting terminal further includes,

a determining means for determining a new needed amount of bandwidth <u>for the QoS</u> <u>connection</u> which is needed based on a filling status of a next transmit queue <u>as bandwidth</u> <u>needed in a next transmission frame</u>, the new needed amount of bandwidth being greater than said needed amount of bandwidth, and not exceeding said fixed amount of bandwidth, and

a transmitting means for transmitting a request for said new needed amount of bandwidth to said central controller <u>with a current transmit frame</u>, wherein

said controller immediately returns, to the requesting terminal, as much of the freed bandwidth as required so that said new needed amount of bandwidth is available to said requesting terminal <u>for said QoS connection</u> ~~to secure said certain QOS~~.

11. (Currently Amended) The <u>requesting terminal</u> ~~central controller~~ according to claim 10, wherein

said ad-hoc network is operated according to the European Telecommunications Standard Institute High Performance Radio Local Area Networks/2 (ETSI HIPERLAN /2) standard.

12. (Previously Presented) The method according to claim 4, wherein

said ad-hoc network is operated according to the European Telecommunications Standard Institute High Performance Radio Local Area Networks/2 (ETSI HIPERLAN / 2) standard.

13-14. (Canceled)

15. (Previously Presented) The method according to claim 1 or 2, wherein the freed bandwidth is re-allocated in a next transmission frame.

16. (Previously Presented) The method according to claim 5, further comprising:

allocating some or all of said freed bandwidth to another connection of the ad-hoc network, the another connection being a connection without a fixed amount of allocated bandwidth.

17. (Previously Presented) The central controller of an ad-hoc network according to claim 7, wherein

the certain amount of bandwidth is allocated to another connection of the ad-hoc network, the another connection being a connection without a fixed amount of allocated bandwidth.

Claim 18 (New): The method according to claim 1, wherein the determining said actual needed amount of bandwidth as bandwidth needed in a next transmission frame includes determining said actual needed amount of bandwidth based only on the filling status of the transmit queue.

Claim 19 (New): The method according to claim 4, wherein the determining said new needed amount of bandwidth as bandwidth needed in a next transmission frame includes determining said new needed amount of bandwidth based only on the filling status of the transmit queue.

Claim 20 (New): The central controller according to claim 7, wherein the new needed amount of bandwidth is determined at the requesting terminal based only on the filling status of the transmit queue.

Claim 21 (New): The requesting terminal according to claim 10, wherein the determining means determines the new needed amount of bandwidth based only on the filling status of the transmit queue.

Claim 22 (New): A method to allocate bandwidth, which method is implemented at a central controller of an ad-hoc network, comprising:

allocating, at the central controller, a fixed amount of bandwidth to a video QoS

connection, the video QoS connection requiring a certain quality of service (QoS), wherein

an operator of said video QoS connection is a requesting terminal which is a terminal of said

ad-hoc network, and the fixed amount of bandwidth is independent from an actual needed

amount of bandwidth;

freeing, at the central controller, a certain amount of the allocated fixed amount of

bandwidth as freed bandwidth after receiving a resource request from the operator of said

video QoS connection indicating the actual needed amount of bandwidth, wherein the actual

needed amount of bandwidth does not exceed said fixed amount of bandwidth and said freed

bandwidth is a difference between the allocated fixed amount of bandwidth and the actual

needed amount of bandwidth;

allocating said freed bandwidth to a non-QoS connection; and

when said operator of the video QoS connection transmits a request for a new needed

amount of bandwidth greater than said needed amount of bandwidth, the new needed amount

of bandwidth not exceeding said fixed amount of bandwidth, immediately returning as much

of the freed bandwidth as required so that said new needed amount of bandwidth is available

to said operator of the video QoS connection.